

REMARKS

Please reconsider the application in view of the above amendments and the following remarks.

Disposition of Claims

Prior to this response, the application included claims 1-39. Applicants have cancelled claims 15-39 pursuant to a requirement for restriction. Examiner has rejected claims 1-14. Accordingly, claims 1-14 are presented for examination, with claim 1 being in independent form.

Objections

The examiner has objected to the abstract claiming that it lacks a descriptive statement for the technical disclosure. Applicants have amended the abstract.

Rejections under 35 U.S.C. §§102, 103

The Office Action rejects claims 1, 3, 4, 6, 8, and 14 under 35 U.S.C. 102(b) as being anticipated by Tracy et al. (U.S. 5,808,643).

Independent Claim 1

The Examiner rejected claim 1 as anticipated by Tracy et al. Applicants respectfully traverse. Applicants submit that Tracy does not describe a drop ejection device including ... a partition including a wetting layer and a non-wetting layer, as recited in independent claim 1.

Based on the Examiner's reference to the outside and inside surfaces of Tracy's tubing member 22 (Fig. 3), it seems that the Examiner may have misunderstood the meaning of the terms, wetting and non-wetting layers. It appears that the Examiner is construing a wetting layer and a non-wetting layer to mean a layer that is either touching or not touching a liquid. However, consistent with the use of those terms as commonly used in the art, Applicants use the terms "wetting" and "non-wetting" to characterize the layers of the partition between the fluid

reservoir region and vacuum region of the drop ejection device. For example, applicants explain that a contact angle greater than 90° defines an interface in which the liquid does not wet the solid surface, but rather balls up on the surface. A contact angle of less than 90° defines an interface in which the liquid wets the surface. (See Application paragraph 0033, lines 16-19).

Tracy does not disclose a wetting layer or a non-wetting layer as recited by applicants' claims. Rather, Tracy describes a gas permeable membrane tubing member 22. Air bubbles dissolved in the ink contact the outer surface of the tubing member 22 and permeate through the tubing member's wall into the low pressure side where they are removed by the vacuum source 58. (See col. 4, lines 38-54) The tubing member is made of any suitable gas permeable tubing, such as Manosil Silicon Rubber® tubing. (See col. 4, lines 66-67)

Accordingly, applicants submit that claim 1 is not anticipated and respectfully request that the rejection under 35 U.S.C. 102 be withdrawn. Furthermore, because claims 3, 4, 6, 8, and 14 depend from claim 1, these dependent claims are not anticipated for at least the same reason that independent claim 1 is not anticipated.

The Examiner also rejected dependent claims 2, 5, and 11 as being unpatentable over Tracy et al in view of Moynihan (U.S. 4,947,184). The Examiner acknowledges that Tracy et al fails to disclose the channels having a width of about 0.1 micron to about 5 microns, the wetting layer has a surface energy of about 40 dynes/cm or more, and the wetting layer has a thickness of about 25 microns or less. Applicants submit however Moynihan fails to disclose the feature found to be lacking in Tracy. In particular, Moynihan does not describe or suggest the partition including a wetting layer and a non-wetting layer.

The Examiner also rejected dependent claim 7 and 10 as being unpatentable over Tracy et al in view of Fujimura et al (U.S. 4,751,532). The Examiner acknowledges that Tracy et al fails to disclose the non-wetting layer has a surface energy of about 25 dynes/cm or less as determined according to the dynes test, and the non-wetting layer has a thickness of about 2 microns or less. Applicants submit however Fujimura fails to disclose the feature found to be lacking in Tracy. In particular, Fujimura does not describe or suggest the partition including a wetting layer and a non-wetting layer.

The Examiner also rejected dependent claim 9 as being unpatentable over Tracy et al in view of Cai et al (U.S. 6,457,820). The Examiner acknowledges that Tracy et al fails to

Applicant : Paul A. Hoisington et al.
Serial No. : 10/782,367
Filed : February 19, 2004
Page : 7 of 7

Attorney's Docket No.: 09991-121001

disclose that the polymer used for the non-wetting layer is a fluoropolymer. Applicants submit however Cai fails to disclose the feature found to be lacking in Tracy. In particular, Cai does not describe or suggest the partition including a wetting layer and a non-wetting layer.

Accordingly, applicants submit that claims 2, 5, 7, 9, 10, and 11 are not obvious and respectfully request that the rejection under 35 U.S.C. 103 be withdrawn.

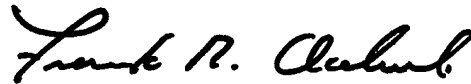
Conclusion

The applicants believe that the claims have been shown to be allowable over the prior art. Applicants believe that this reply is responsive to each ground of rejection cited by the examiner in the Action dated August 24, 2005, and respectfully request favorable action in this application.

Enclosed is a Petition for Extension of Time and a check (\$120— one-month) for the associated fee. Please apply any other charges, not covered, or credits to deposit account 06-1050.

Respectfully submitted,

Date: December 23, 2005



Frank R. Occhiuti
Reg. No. 35,306

Fish & Richardson P.C.
225 Franklin Street
Boston, Massachusetts 02110-2804
Telephone: (617) 542-5070
Facsimile: (617) 542-8906

21234318.doc